CONTENTS

Research Papers

Land clearance and river salinisation in the western Murray Basin, Australia
G.B. Allison, P.G. Cook, G.R. Walker, I.D. Jolly, M.W. Hughes (Glen Osmond, S.A., Australia) and S.R. Barnett (Eastwood, S.A., Australia) 1
Evaporation reduction in stock tanks for increasing water supplies
M.A. Khan and V.C. Issac (Jodhpur, India) 21
Monitoring moisture storage in trees using time domain reflectometry
J. Constantz and F. Murphy (Menlo Park, CA, U.S.A.) 31
Analytical representation of cross-section hydraulic properties
J. Garbrecht (Durant, OK, U.S.A.) 43
Solute and heat transport experiments for estimating recharge rate
M. Taniguchi and M.L. Sharma (Wembley, W.A., Australia) 57
Groundwater resources development in the eastern Sahara
J.W. Lloyd (Birmingham, U.K.) 71
Analysis of flow near a dug well in an unconfined aquifer
K. Sridharan, D. Sathyanarayana and A. Siva Reddy (Bangalore, India) 89
Groundwater–lake interactions: I. Accuracy of seepage meter estimates of lake seepage
R.D. Shaw and E.E. Prepas (Edmonton, Alta., Canada) 105
Groundwater–lake interactions: II. Nearshore seepage patterns and the contribution of ground water to lakes in central Alberta
R.D. Shaw and E.E. Prepas (Edmonton, Alta., Canada) 121
Soilwater distribution in a nonuniformly irrigated field with root extraction
R. Wallach (Rehovot, Israel) 137
Solutions of one-dimensional water flow and mass transport equations in variably saturated porous media by the finite element method
V.Z. Antonopoulos and Z.G. Papazafiriou (Thessaloniki, Greece) 151
Application of factor analysis to the hydrogeochemical study of a coastal aquifer
F. Ruiz, V. Gomis and P. Blasco (Alicante, Spain) 169
Groundwater response to reforestation in the Darling Range of Western Australia
R.W. Bell, N.J. Schofield, I.C. Loh and M.A. Bari (Leederville, W.A., Australia) 179
An examination of computed steady-state water-table heights in unconfined aquifers: Dupuit–Forchheimer estimates and exact analytical results
E.G. Youngs (Harpenden, U.K.) 201
Relationships in regional groundwater discharge to streams: an analysis by numerical simulation
D. Ophori and J. Tóth (Edmonton, Alta., Canada) 215
Statistical analysis of the hydrochemistry of ground waters in Columbia River basalts
J.A. Riley, R.K. Steinhorst, R.E. Williams (Moscow, ID, U.S.A.) and G.V. Winter (Viola, ID, U.S.A.) 245
The propagation of a wave packet on a free surface within a saturated porous layer
H. Power (Caracas, Venezuela) 263
Relationships between groundwater contamination and major-ion chemistry in a karst aquifer
B.R. Scanlon (Lexington, KY, U.S.A.) 271
The groundwater exchange rate of the southern Baltic coastal lowland
K. Burzyński and A. Sadurski (Gdansk, Poland) 293
Hillslope parameter estimation using the inverse procedure
R.H.B. Hebbert (Nedlands, W.A., Australia) and R.E. Smith (Fort Collins, CO, U.S.A.) 307

Finite element simulation of nonlinear kinematic surface runoff
G.E. Blandford (Lexington, KY, U.S.A) and M.E. Meadows (Columbia, SC, U.S.A.) . . 335
A deuterium-calibrated groundwater flow model of a regional carbonate–alluvial system
S.T. Kirk and M.E. Campana (Reno, NV, U.S.A.) 357

Short Note

Reliability based time axes for flood data presentation
W.E. Bardsley (Hamilton, New Zealand) 389

Discussions

Numerical analysis of large-diameter wells with a seepage face — Comment
Z. Şen (Jeddah, Kingdom of Saudi Arabia) 393
Numerical analysis of large-diameter wells with a seepage face — Reply
R. Sakthivadivel (Madras, India) and K.R. Rushton (Birmingham, U.K.) 398

Letter to the Editor

The applied environmetrics meteorological tables
T. Beer (Canberra, A.C.T., Australia). 401

Book Review

Flow Regimes from Experimental and Network Data (Frend) — C. Cunnane 403